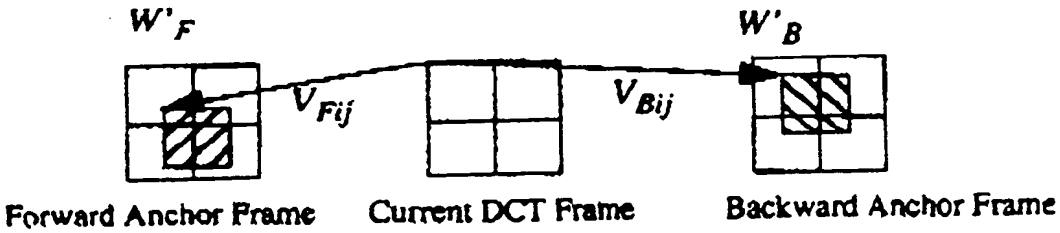
W'F
W'B
VFij
VBij
Forward Anchor Frame
Current DCT Frame
Backward Anchor Frame

Fig. 1

Fig. 2a

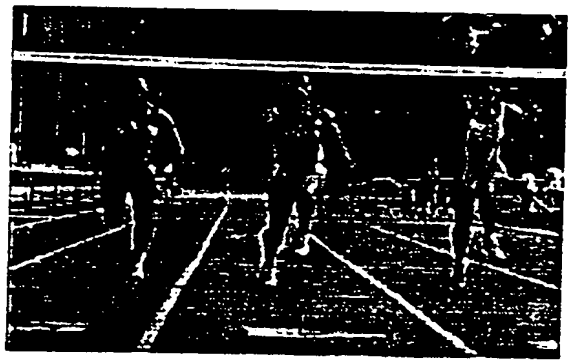

Fig. 2b

Fig. 2c

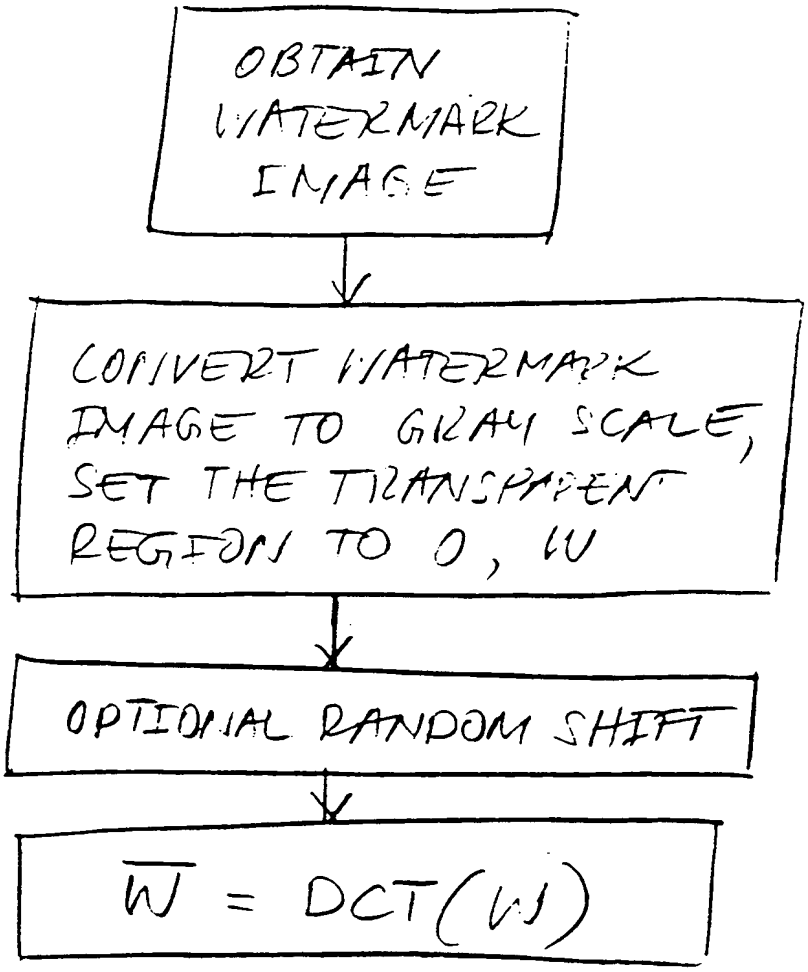
OBTAIN WATERMARK IMAGE
CONVERT WATERMARK IMAGE TO GRAY SCALE, SET THE TRANSPARENT REGION TO 0, W
OPTIONAL RANDOM SHIFT
$\overline{W} = DCT(W)$

Fig. 3

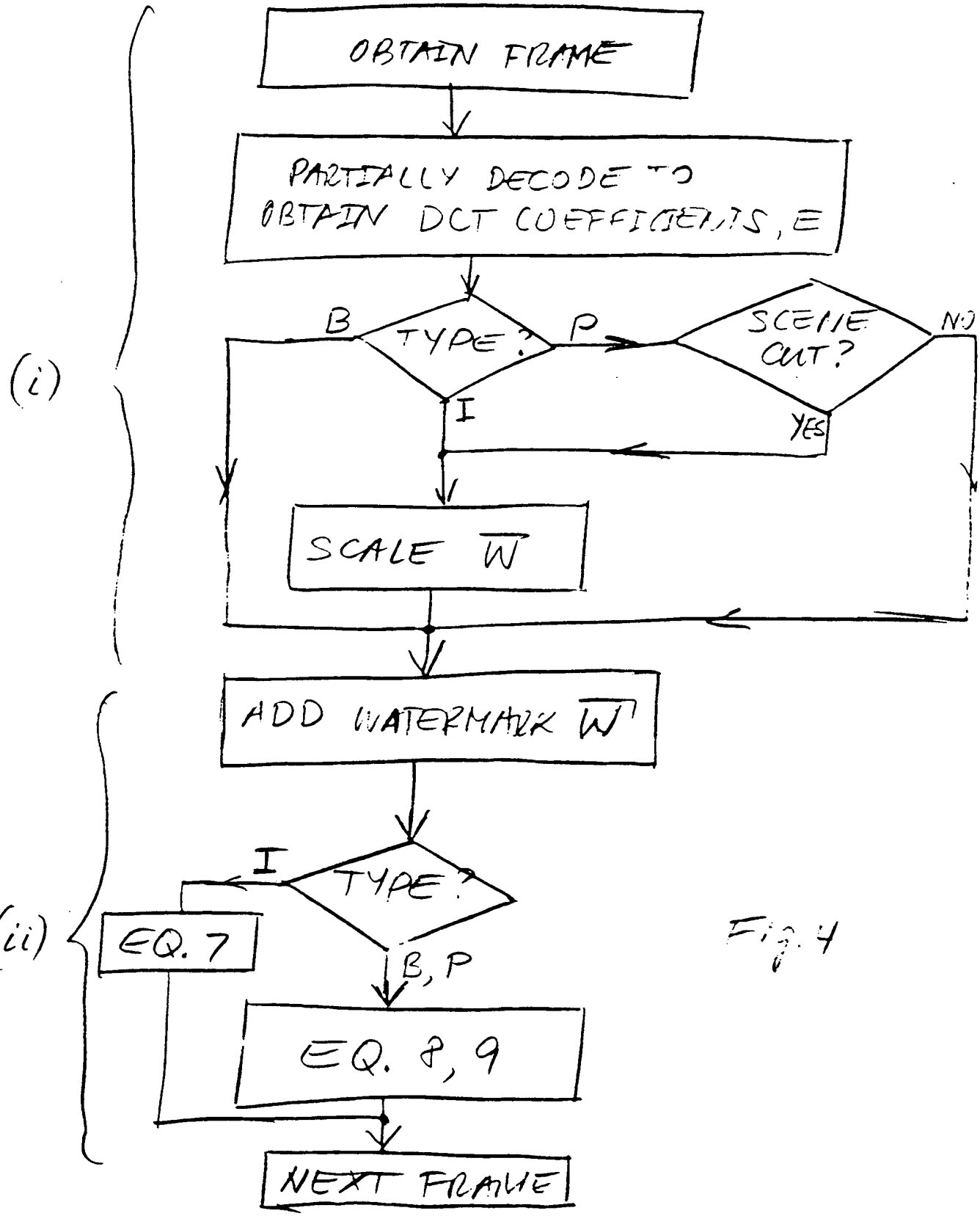
OBTAIN FRAME
PARTIALLY DECODE TO OBTAIN DCT COEFFICIENTS, E
B
TYPE?
P
SCENE CUT?
NO
I
YES
SCALE W
ADD WATERMARK W
I
TYPE?
EQ. 7
B, P
EQ. 8, 9
NEXT FRAME
(i)
(ii)

Fig. 4

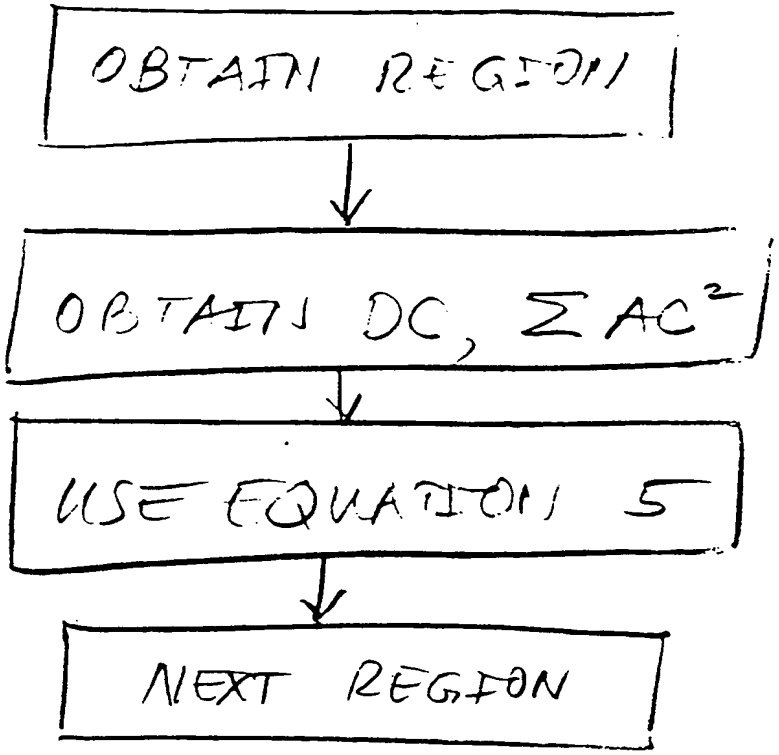
OBTAIN REGION
OBTAIN DC, $\Sigma AC^2$
USE EQUATION 5
NEXT REGION

Fig. 5